

[Appendix Tables]

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App. Table 1 List of the Survey Results of Manganese Nodules

Sample No. (Station)	Location				Manganese Nodules							XRF analyses (wt%)					Sediment			T. P. L.		Remarks
	Latitude	Longitude	Depth (m)	Topography	Size distribution (%)				Abundance (kg/m ²)	Shape	S.G. Wet	H ₂ O (wt%)	Ni	Cu	Co	Mn	Fe	* silt%	* cal%	type	thick. (m)	
					0-2 cm	2-4 cm	4-6 cm	6-8 cm														
O3S1827SC01	17° 00.00' S	169° 00.03' W	5.135	(Plain) Flat					0.00										ds	0		
O3S1827FG02	16° 59.01' S	169° 01.03' W	5.229	(Plain) Flat					0.00										ds	0		
O3S1827FG03	16° 58.97' S	168° 58.99' W	5.220	(Plain) Flat					0.00										ds	0		
(03501) Average			5.195						0.00													
O3S1927FG01	18° 01.00' S	168° 59.96' W	5.092	(Hill) Flat					0.00										d2	0		
O3S1927FG02	18° 00.03' S	169° 01.00' W	5.079	(Hill) Flat					0.00										d2	0		
O3S1927FG03	17° 59.97' S	168° 58.99' W	5.105	(Hill) Flat					0.00										d2	0		
(03502) Average			5.092						0.00													
O3S2027SC01	18° 59.96' S	169° 00.01' W	4.754	(Hill) Flat					0.00										ds	0		
O3S2027FG02	18° 59.01' S	169° 01.02' W	4.785	(Hill) Flat					0.00										ds	0		
O3S2027FG03	18° 58.97' S	168° 59.00' W	4.738	(Hill) Flat					0.00										ds	0		
(03503) Average			4.759						0.00													
O3S2028FG01	18° 59.97' S	168° 00.01' W	5.149	(Hill) Flat	100				0.12	1.6	28.46	0.28	0.07	0.78	21.27	19.00			d2	0		
O3S2028FG02	18° 59.00' S	168° 01.04' W	5.176	(Hill) Flat					0.00										d2	0		
O3S2028FG03	18° 58.97' S	167° 59.01' W	5.211	(Hill) Flat					0.00										d2	0		
(03504) Average			5.179		100				0.12	1.6	28.46	0.28	0.07	0.78	21.27	19.00						
O3S1928SC01	18° 00.97' S	167° 58.99' W	5.349	(Hill) Flat					0.00										ds	0		
O3S1928FG02	18° 00.02' S	168° 00.00' W	5.323	(Hill) Slope					0.00										d2	0		
O3S1928FG03	17° 59.96' S	167° 58.00' W	5.396	(Hill) Flat					0.00										d2	0		
(03505) Average			5.356						0.00													
O3S1929FG01	17° 59.98' S	166° 59.98' W	5.412	(Plain) Flat	29	71			1.25	2.0	25.61	0.46	0.25	0.35	18.65	16.29			a	10		
O3S1929FG02	17° 59.02' S	167° 01.01' W	5.396	(Plain) Flat	25	75			0.37	2.1	26.89	0.42	0.36	0.24	18.10	16.73			a	10		
O3S1929FG03	17° 58.97' S	166° 59.00' W	5.391	(Plain) Flat	21	79			1.13	2.0	28.3	0.26	0.36	0.40	18.05	17.64			a	10		
(03506) Average			5.400		25	75			0.92	2.0	26.9	0.37	0.31	0.36	18.33	16.90						
O3S2029SC01	18° 00.00' S	166° 59.98' W	5.264	(Plain) Flat					0.05										ac	10		
O3S2029FG02	18° 59.02' S	167° 01.02' W	5.260	(Plain) Flat	100				0.05	1.75	31.06	0.53	0.28	0.37	19.56	14.85			d2	0		
O3S2029FG03	18° 58.98' S	166° 59.01' W	5.261	(Plain) Flat					0.05										d2	0		
(03507) Average			5.262						0.05	1.75	31.06	0.53	0.28	0.37	19.56	14.85						

App. Table 2 Sediments Properties at Each Station

Station	SampleNo.	Depth (c m)	Water content (%)	Specific gravity	TOC (mg/g(D))	T-N (mg/g(D))
03S2027SC01 18° 59.961' S 169° 00.010' W	①	0-1	72.9	—	2.36	0.43
		1-2	71.5	—	2.44	0.43
		2-3	71.5	—	2.68	0.47
		3-4	70.5	—	2.47	0.46
		4-5	64.5	—	1.89	0.32
03S2326SC01 22° 00.012' S 169° 59.978' W	①	0-1	32.3	—	0.38	0.08
		1-2	26.6	—	0.21	0.03
		2-3	28.0	—	0.27	0.07
		3-4	50.1	—	1.27	0.24
		4-5	54.7	—	1.37	0.25
03S2327SC01 21° 59.992' S 169° 00.013' W	①	0-1	37.7	—	0.56	0.07
		1-2	46.1	—	1.01	0.17
		2-3	51.0	—	1.42	0.27
		3-4	52.2	—	1.48	0.25
		4-5	49.7	—	1.34	0.22

Station	SampleNo.	Depth (c m)	Water content (%)	Specific gravity	TOC (mg/g(D))	T-N (mg/g(D))
03S2027SC01 18° 59.961' S 169° 00.010' W	②	0-1	71.6	2.67	2.37	0.36
		1-2	70.6	2.67	2.32	0.36
		2-3	70.4	2.68	2.23	0.32
		3-4	69.1	2.67	1.96	0.30
		4-5	68.2	2.67	1.78	0.22
		10	67.1	2.67	—	—
		20	66.5	2.63	—	—
03S2326SC01 22° 00.012' S 169° 59.978' W	②	0-1	37.9	2.78	0.80	0.11
		1-2	27.9	2.78	0.32	0.06
		2-3	25.2	2.77	0.16	0.03
		3-4	44.3	2.77	0.92	0.15
		4-5	54.3	2.66	1.56	0.29
		10	56.0	2.63	—	—
		20	65.0	2.66	—	—
03S2327SC01 21° 59.992' S 169° 00.013' W	②	0-1	35.2	2.79	0.61	0.13
		1-2	32.2	2.75	0.42	0.11
		2-3	47.6	2.70	1.13	0.21
		3-4	50.0	2.71	1.21	0.29
		4-5	54.4	2.69	1.30	0.31
		10	60.3	2.70	—	—
		20	65.9	2.70	—	—
30	67.2	2.70	—	—		

Station	SampleNo.	Depth (c m)	Water content (%)	Specific gravity	TOC (mg/g(D))	T-N (mg/g(D))
03S2027SC01 18° 59.961' S 169° 00.010' W	average	0-1	72.2	—	2.37	0.40
		1-2	71.0	—	2.38	0.39
		2-3	71.0	—	2.45	0.39
		3-4	69.8	—	2.21	0.38
		4-5	66.4	—	1.83	0.27
03S2326SC01 22° 00.012' S 169° 59.978' W	average	0-1	35.1	—	0.59	0.10
		1-2	27.3	—	0.27	0.05
		2-3	26.6	—	0.22	0.05
		3-4	47.2	—	1.09	0.20
		4-5	54.5	—	1.46	0.27
03S2327SC01 21° 59.992' S 169° 00.013' W	average	0-1	36.5	—	0.59	0.10
		1-2	39.2	—	0.71	0.14
		2-3	49.3	—	1.27	0.24
		3-4	51.1	—	1.35	0.27
		4-5	52.0	—	1.32	0.27

App. Table 3 Frequency (%) of Sediment Particle Diameter at Each Station

Station	03S2027SC01									03S2326SC01									03S2327SC01								
	0-1	1-2	2-3	3-4	4-5	10	20	30	0-1	1-2	2-3	3-4	4-5	10	20	30	0-1	1-2	2-3	3-4	4-5	10	20	30			
0.02-0.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
0.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
0.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
0.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
0.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
0.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
0.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
0.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14			
0.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21			
0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21			
0.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23			
0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23			
0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24			
0.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24			
0.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24			
1.1	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.26			
1.2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.29			
1.3	0.12	0.13	0.11	0.00	0.00	0.13	0.21	0.14	0.00	0.00	0.00	0.00	0.00	0.13	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24	0.35			
1.4	0.20	0.21	0.20	0.00	0.00	0.22	0.28	0.23	0.00	0.00	0.00	0.00	0.00	0.21	0.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.31	0.47			
1.5	0.26	0.29	0.26	0.20	0.22	0.28	0.39	0.32	0.00	0.00	0.00	0.00	0.17	0.18	0.27	0.35	0.00	0.00	0.14	0.16	0.14	0.18	0.43	0.64			
1.6	0.37	0.41	0.37	0.34	0.38	0.39	0.56	0.46	0.00	0.00	0.00	0.00	0.29	0.30	0.37	0.49	0.00	0.00	0.23	0.27	0.24	0.29	0.63	0.92			
1.8	0.53	0.61	0.55	0.47	0.53	0.57	0.81	0.69	0.00	0.13	0.00	0.13	0.40	0.41	0.54	0.70	0.00	0.00	0.31	0.35	0.32	0.38	0.92	1.34			
1.9	0.74	0.86	0.77	0.66	0.74	0.78	1.13	1.00	0.00	0.21	0.00	0.20	0.56	0.55	0.74	0.97	0.00	0.00	0.42	0.47	0.44	0.50	1.28	1.87			
2.1	1.00	1.18	1.06	0.90	1.01	1.05	1.54	1.40	0.18	0.25	0.15	0.24	0.76	0.75	1.00	1.31	0.18	0.00	0.57	0.63	0.59	0.65	1.75	2.53			
2.3	1.25	1.48	1.34	1.14	1.28	1.31	1.93	1.81	0.28	0.31	0.22	0.29	0.97	0.95	1.25	1.62	0.27	0.00	0.71	0.77	0.75	0.81	2.18	3.15			
2.5	1.49	1.77	1.60	1.37	1.54	1.55	2.29	2.20	0.31	0.37	0.25	0.35	1.18	1.15	1.49	1.92	0.30	0.16	0.86	0.92	0.90	0.95	2.60	3.71			
2.8	1.67	1.98	1.80	1.54	1.72	1.72	2.53	2.48	0.36	0.43	0.28	0.40	1.34	1.30	1.68	2.13	0.33	0.24	0.98	1.03	1.02	1.07	2.88	4.05			
3.0	1.77	2.09	1.92	1.64	1.84	1.81	2.64	2.63	0.41	0.49	0.33	0.44	1.47	1.41	1.79	2.25	0.38	0.24	1.07	1.11	1.11	1.14	3.00	4.16			
3.3	1.81	2.13	1.96	1.70	1.88	1.85	2.65	2.68	0.46	0.55	0.37	0.48	1.54	1.49	1.83	2.28	0.42	0.26	1.14	1.16	1.16	1.17	3.03	4.14			
3.6	1.80	2.10	1.94	1.69	1.86	1.82	2.55	2.60	0.51	0.60	0.41	0.51	1.58	1.51	1.82	2.24	0.46	0.28	1.16	1.18	1.18	1.17	2.94	3.98			
3.9	1.77	2.03	1.89	1.65	1.80	1.76	2.40	2.48	0.57	0.67	0.45	0.53	1.58	1.52	1.77	2.15	0.50	0.31	1.18	1.19	1.18	1.14	2.81	3.75			
4.2	1.70	1.95	1.81	1.59	1.72	1.68	2.23	2.30	0.62	0.73	0.49	0.54	1.57	1.50	1.69	2.03	0.54	0.34	1.17	1.18	1.15	1.10	2.62	3.47			
4.6	1.62	1.84	1.71	1.51	1.64	1.60	2.05	2.10	0.69	0.80	0.53	0.54	1.54	1.46	1.59	1.89	0.59	0.36	1.16	1.15	1.12	1.03	2.43	3.16			
5.0	1.53	1.74	1.61	1.44	1.54	1.52	1.87	1.91	0.75	0.87	0.58	0.55	1.50	1.42	1.49	1.73	0.63	0.39	1.13	1.12	1.07	0.96	2.22	2.85			
5.5	1.45	1.63	1.52	1.36	1.45	1.43	1.69	1.72	0.81	0.93	0.63	0.55	1.45	1.38	1.37	1.57	0.68	0.43	1.11	1.10	1.02	0.89	2.01	2.54			
6.0	1.35	1.53	1.43	1.28	1.37	1.35	1.54	1.55	0.87	1.00	0.67	0.55	1.40	1.33	1.26	1.41	0.73	0.46	1.07	1.07	0.97	0.82	1.82	2.24			
6.5	1.28	1.44	1.35	1.22	1.29	1.28	1.40	1.39	0.92	1.06	0.71	0.54	1.36	1.29	1.16	1.26	0.77	0.49	1.05	1.04	0.93	0.76	1.63	1.97			
7.1	1.21	1.37	1.28	1.17	1.23	1.24	1.29	1.27	0.99	1.13	0.75	0.54	1.33	1.26	1.06	1.13	0.83	0.53	1.02	1.01	0.89	0.70	1.47	1.72			
7.8	1.16	1.31	1.24	1.13	1.20	1.20	1.21	1.17	1.05	1.21	0.81	0.54	1.33	1.24	0.97	1.02	0.88	0.56	1.02	0.99	0.86	0.66	1.34	1.52			
8.5	1.13	1.29	1.22	1.12	1.18	1.19	1.15	1.10	1.12	1.30	0.87	0.54	1.34	1.25	0.90	0.93	0.95	0.61	1.02	0.99	0.85	0.62	1.23	1.35			
9.2	1.12	1.29	1.23	1.13	1.19	1.20	1.13	1.06	1.21	1.40	0.94	0.56	1.37	1.27	0.84	0.85	1.03	0.67	1.05	0.99	0.86	0.59	1.14	1.20			
10.1	1.13	1.33	1.26	1.16	1.23	1.23	1.12	1.03	1.31	1.53	1.04	0.58	1.44	1.33	0.79	0.81	1.14	0.73	1.10	1.02	0.88	0.59	1.08	1.09			
11.0	1.17	1.38	1.31	1.22	1.28	1.28	1.13	1.03	1.45	1.70	1.16	0.62	1.54	1.40	0.74	0.77	1.26	0.83	1.18	1.06	0.92	0.58	1.04	1.00			
12.0	1.23	1.47	1.39	1.31	1.37	1.36	1.16	1.05	1.62	1.89	1.32	0.66	1.66	1.51	0.71	0.75	1.42	0.95	1.29	1.12	0.98	0.59	1.00	0.93			
13.1	1.31	1.57	1.49	1.41	1.47	1.45	1.19	1.08	1.82	2.10	1.52	0.73	1.79	1.64	0.69	0.75	1.61	1.09	1.42	1.19	1.07	0.61	0.99	0.88			
14.3	1.42	1.69	1.61	1.55	1.60	1.56	1.25	1.12	2.04	2.33	1.74	0.81	1.94	1.79	0.66	0.76	1.83	1.27	1.58	1.29	1.17	0.64	0.99	0.84			
15.6	1.53	1.81	1.75	1.68	1.74	1.67	1.30	1.18	2.24	2.55	1.99	0.90	2.10	1.96	0.65	0.78	2.04	1.46	1.74	1.40	1.29	0.67	1.00	0.81			
17.0	1.67	1.94	1.88	1.83	1.87	1.79	1.37	1.24	2.44	2.77	2.24	1.02	2.24	2.13	0.64	0.82	2.26	1.67	1.92	1.52	1.42	0.72	1.02	0.79			
18.5	1.80	2.05	2.01	1.97	2.00	1.89	1.44	1.31	2.60	2.95	2.46	1.13	2.39	2.29	0.65	0.86	2.45	1.86	2.08	1.63	1.54	0.79	1.04	0.79			
20.2	1.94	2.16	2.13	2.10	2.12	2.00	1.51	1.39	2.70	3.08	2.65	1.26	2.52	2.45	0.66	0.92	2.60	2.03	2.23	1.74	1.67	0.86	1.08	0.79			
22.0	2.08	2.27	2.25	2.21	2.23	2.09	1.60	1.48	2.76	3.20	2.78	1.36	2.66	2.56	0.68	1.00	2.71	2.14	2.35	1.85	1.79	0.94	1.13	0.81			
24.0	2.23	2.37	2.36	2.32	2.34	2.19	1.70	1.58	2.79	3.29	2.87	1.46	2.79	2.71	0.71	1.08	2.80	2.21	2.46	1.95	1.91	1.05	1.19	0.85			
26.2	2.40	2.49	2.47	2.42	2.45	2.29	1.83	1.69																			

App. Table 4 Weather and Sea-state Data

Table-1 Monthly Distribution of Wind Direction in 2003

W.D.	CALM	N	NE	E	SE	S	SW	W	WNW	NW	NNW	unknown	Total
Nov	0	0	0	0	3	18	43	46	86	6	0	0	202
%	0.00	0.00	0.00	0.00	1.49	8.91	21.29	22.77	42.57	2.97	0.00	0.00	100.0

Table-2 Monthly Distribution of Wind Velocity in 2003

(W.D.: m/sec)

W.D.	CALM	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20-	Total
Nov	0	0	0	0	2	12	36	60	44	24	14	4	0	4	1	0	1	0	0	0	0	0	202
%	0.00	0.00	0.00	0.00	0.99	5.94	17.82	29.70	21.78	11.88	6.93	1.98	0.00	1.98	0.50	0.00	0.50	0.00	0.00	0.00	0.00	0.00	100.0

*) CALM : 0.0m/sec

W.D.0 : 0.1m/sec~1.0m/sec

W.D.3 : 3.0m/sec~4.0m/sec

W.D.20- : >20.0m/sec

Table-3 Monthly Distribution of Weather in 2003

weather	fine	cloudy	rain	unknown	total	ligh day
Nov	5	4	0		9	2
%	55.56	44.44	0.00	0.00	100.0	22.22

*) rain: r,d,p,q>5 times in the day

fine: other than rain day and b,bc>half day

cloudy: other fine & rain day and r,d,p,q,c,o>half day

light rain: fine or cloudy and r,d,p,q day

*) Remarks Symbols for weather

b: fine(very fine)

d: drizzle

bc: partly cloudy(fine)

p: sudden

c: cloudy

shower

o: very cloudy

q: squall

r: rainy

f: fog

m: mist

Table-4 Monthly Frequency Distribution of Atmospheric Pressure(daily average) in 2003

(A.P.: hpa)

A.P.	-980	980	981	982	983	984	985	986	987	988	989	990	991	992	993	994	995	996
Nov	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
A.P.	997	998	999	1000	1001	1002	1003	1004	1005	1006	1007	1008	1009	1010	1011	1012	1013	1014
Nov	0	0	0	0	0	0	0	0	4	5	5	35	50	54	31	12	4	
%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.98	2.48	2.48	17.33	24.75	26.73	15.35	5.94	1.98	
A.P.	1015	1016	1017	1018	1019	1020	1021	1022	1023	1024	1025	1026	1027	1028	1029	1030-	不明	合計
Nov	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	202
%	0.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.0

*) A.P.1000: 1000.0hpa~1001.0hpa

A.P.-980: <980hpa

A.P.1030-: >1030.0hpa

Table-5 Monthly Frequency Distribution of Swell 1 Direction in 2003

S.D.	N	NE	E	SE	S	SW	W	WNW	NW	NNW	unknown	Total
Nov	0	0	0	1	12	3	34	38	22	0	0	0
%	0.00	0.00	0.00	0.50	5.94	1.49	16.83	18.81	10.89	0.00	0.00	0.00

Table-6 Monthly Frequency Distribution of Swell 1 Cycle in 2003

(S.C.: sec)

S.C.	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	unknown	Total
Nov	0	0	0	0	0	0	1	61	40	6	2	0	0	0	0	0	92	202
%	0.00	0.00	0.00	0.00	0.00	0.00	0.50	30.20	19.80	2.97	0.99	0.00	0.00	0.00	0.00	0.00	45.54	100.0

Table-7 Monthly Frequency Distribution of Swell 1 Height in 2003

(S.H.: m)

S.H.	0	1	2	3	4	5	6	7	8	9	10	unknown	Total
Nov	0	15	84	9	0	2	0	0	0	0	0	92	202
%	0.00	7.43	41.58	4.46	0.00	0.99	0.00	0.00	0.00	0.00	0.00	45.54	100.0

Table—8 Monthly Frequency Distribution of Degree of Cloudiness in 2003

D.C.	0	1	2	3	4	5	6	7	8	9	10	unknowr	Total
Nov	0	0	3	20	49	51	24	37	18	0	0	0	202
%	0.00	0.00	1.49	9.90	24.26	25.25	11.88	18.32	8.91	0.00	0.00	0.00	100.0

Table—9 Monthly Frequency Distribution of Swell 2 Direction in 2003

S.D.	N	N N E	N E	E N E	E	E S E	S E	S S E	S	S S W	S W	W S W	W	W N W	N W	N N W	unknowr	Total
Nov	0	0	0	0	0	6	0	0	1	0	4	0	0	0	0	3	188	202
%	0.00	0.00	0.00	0.00	0.00	2.97	0.00	0.00	0.50	0.00	1.98	0.00	0.00	0.00	0.00	1.49	93.07	100.0

Table—10 Monthly Frequency Distribution of Swell 2 Cycle in 2003

(S.C.: sec)

S.C.	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	unknowr	Total
Nov	0	0	0	0	0	0	6	4	4	0	0	0	0	0	0	0	188	202
%	0.00	0.00	0.00	0.00	0.00	0.00	2.97	1.98	1.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	93.07	100.0

Table—11 Monthly Frequency Distribution of Swell 2 Height in 2003

(S.H.: m)

S.H.	0	1	2	3	4	5	6	7	8	9	10	unknowr	Total
Nov	0	14	0	0	0	0	0	0	0	0	0	188	202
%	0.00	6.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	93.07	100.0

App. Table 5 Sea-Water Sound Velocity for MBES

NIUE	
Latitude	17° 0.003' S
Longitude	169° 0.037' W
Water depth (m)	Sound Velocity (m · s ⁻¹)
5	1,541.5
10	1,541.7
20	1,542.2
100	1,538.1
125	1,535.9
150	1,536.4
200	1,535.0
250	1,529.0
400	1,508.9
500	1,496.6
600	1,489.0
700	1,485.9
900	1,482.4
1,000	1,482.0
1,200	1,482.3
1,500	1,485.2
2,000	1,491.5
3,000	1,506.5
5,000	1,539.3
8,337	1,593.6
Average	1,530.9